



Guidance Material

GM-AIR-11

Aircraft Maintenance Engineer's Logbook

Foreword

This logbook has been developed by the Bhutan Civil Aviation Authority in its current format as the preferred means of recording aircraft practical maintenance training and experience in order to support an application to the authority for the issue or variation of an Aircraft Maintenance Licence.

The format and layout of the logbook is designed to enable a methodical and progressive recording of personal data and ongoing work experience by the user, thereby enabling a quicker and more accurate assessment of the user's technical knowledge and experience by a regulatory authority, employer or assessor.

The logbook has been produced in loose-leaf form so that additional pages may be inserted selectively as and when required, in order to accommodate progressive recording of ongoing work experience, and to enable removal of pages containing information, which may be considered redundant or surplus to the user's current needs.

Used correctly, this logbook should serve as a compact and portable reference document, which would hold a concise history of the holder's training, experience, qualification and employment record, together with a facility to record any ongoing work experience as may be required for the purpose of applying to the authority for the issue or variation of an Aircraft Maintenance Licence.

The design and content of this logbook have been derived from current regulatory requirements. However, please note that completion of this logbook does not preclude the need to produce original documents, such as employment testimonials, training certificates or certified true copies of the same, where these may be required.



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Section 1.1 Instructions for use

General Information

All entries in this logbook shall be made in ink.

Dates entered shall follow the format DD/MM/YY.

Each page shall be identified by the logbook owner's name and signature.

When used in support of an application for a licence, any false entry in the logbook will constitute an offence under the regulation currently in force.

Completion of the logbook

Entries in the logbook are made by 3 categories of persons:

1. The Logbook Holder

It is important to note that engineers may not certify their own entries. However, certain pages require the name and signature of the logbook holder. This is primarily for traceability and identification purposes, particularly when logbook pages are separated from the logbook and used in isolation.

2. The Assessor

(Section 2.1 – Basic Skills)

The Assessor may be any one of the following:

- a) An appropriately qualified BCAR-147 training instructor or person appropriately qualified and authorised by the organisation under the terms of its approval to carry out the assessment.
- b) An appropriately qualified licensed aircraft maintenance engineer employed by a BCAR-145 maintenance organisation and authorised by the BCAR-147 approval organisation.
- c) An appropriately qualified licensed aircraft maintenance engineer employed by a BCAR-M Subpart F organisation and authorised by the BCAR-147 approval organisation.

- d) A person authorised for the purpose by the Bhutan Civil Aviation Authority.

The assessor shall also ensure that the logbook holder is able to:

- 1. identify the appropriate standards; and
- 2. select and use the correct tools for the task/process.

When confirming entries, assessors shall sign and print their names, and also quote their position within the organisation on behalf of which the assessment has been carried out.

3. The Task Supervisor

(Section 3.1 – Maintenance Experience)

The Task Supervisor may be any one of the following:

- a) An appropriately qualified BCAR-147 training instructor authorised by the organisation under the terms of its approval to conduct practical training or OJT (on the job training).
- b) An appropriately qualified licensed aircraft maintenance engineer employed by a BCAR-145 maintenance organisation and authorised to conduct OJT.
- c) An appropriately qualified licensed aircraft maintenance engineer employed by a BCAR-M Subpart F organisation and authorised to conduct OJT.
- d) A person authorised for the purpose by the Bhutan Civil Aviation Authority.

The supervisor shall confirm the required entries by appending his/her name, signature and licence number in the appropriate column.

Section 1.2 Personal Data

This section contains

1. Provision for recording the logbook owner's name, nationality, date of birth, licence number and address.
2. Provision for recording personal training.

Section 1.3 Employment Record

This section has been provided for recording the logbook owner's employment history. Employment record entries should be confirmed by a senior member of the employer's organisation holding the appropriate authority.

Section 2.1 Basic Skills

This section is to record the achievement of practical competencies required to support the issue of a basic licence in the appropriate category. The skills identified in this section relate directly to corresponding licence privileges. The required training and assessment may be carried out on in-service aircraft, in workshops, on training equipment or on simulators. Each entry must be confirmed by an assessor, with his/her signature, position and organisation details, to indicate that the logbook holder has achieved the required competence on the subject. A specific task should only be entered once. There is no requirement to make multiple entries for the same or similar tasks.

Section 3.1 Maintenance Experience

This section is to record experience gained on in-service aircraft. The type and range of tasks undertaken must reflect the requirements of BCAR-66 in respect of the category and/or type rating applied for. Work task details should be recorded by the logbook holder on completion of the task and countersigned by the task supervisor as soon as practicable after completion of the task. The supervisor will append his/her name, signature and licence number to the record to indicate that the task has been carried out correctly under his/her direct supervision. A specific task should only be entered once. There is no requirement to make multiple entries for the same or similar tasks.

Section 3.2 Typical Maintenance Task

This section gives examples of typical maintenance tasks, which may be undertaken. It is not an exhaustive list and may be added to in order to support an application for an aircraft maintenance licence. The type and number of tasks undertaken must be representative of the aircraft structure and systems, both in terms of technology and complexity. While relatively simple tasks may be included, other more complex tasks appropriate to the privileges of the licence applied for should also be undertaken and recorded.

Section 3.3 Glossary

This Section contains a Glossary of abbreviations used in Section 3.2. Abbreviations and their meaning may vary between manufacturers, hence excessive use of these in compiling work records is not recommended.

Section 1.2 Personal Data

Title:	Forename(s):
Surname:	Date of Birth:
Nationality:	Licence No:
Permanent Address:	
Phone Number:	(Record changes of address overleaf)
Log Book Owner's Name: Signature:	

Changes of permanent address

1:	2:
3:	4:
Log Book Owner's Name: Signature:	

Record of Training

Type of Training Completed	Training Organisation	Date		Result
		From	To	
Log Book Owner's Name: Signature:				

Section 1.3 Employment Record

Employer:		
From:	To:	Position in Company:
Nature of Duties:		
Type of aircraft or other products:		
Confirmed by:		
Signature:	Date:	Position in Company:
Employer:		
From:	To:	Position in Company:
Nature of Duties		
Type of aircraft or other products:		
Confirmed by:		
Signature:	Date:	Position in Company:
Log Book Owner's Name:		
Signature:		

Section 2.1 Basic Skills

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	General Aircraft Maintenance		
	Awareness of hazards when working with aircraft – noise, heat, moving surfaces, propellers, intakes, exhausts.	A, B1, B2	
	Safety precautions when using fluids, gasses and chemicals.	A, B1, B2	
	Mechanical Fitting Practices (Common)		
	Related safety practices.	B1	
	Use a range of hand tools and power tools to achieve a dimensional accuracy of ± 0.010 in / 0.25 mm.	B1	
	Interpret and work to engineering drawings.	B1	
	Use basic tools and equipment for: cutting, forming and joining commonly used materials. (Ferrous and non-ferrous).	B1	
	Mark out use measuring equipment e.g. micrometers, rulers, verniers, height gauges, squares, vee blocks and surface tables.	B1	
	Select and use feeler, slip, limit, go / no go gauges.	A, B1	
	Fit and remove thread inserts.	A, B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Mechanical Fitting Practices (Common) (Cont.)		
	Drill and tap a threaded hole.	B1	
	Drill and ream perpendicular holes in ferrous and non-ferrous material.	B1	
	Assembly / Disassembly Practices (Common)		
	Apply correct procedures: Material storage and handling.	B1, B2	
	Identification of a range of materials.	B1, B2	
	Cleaning and Contamination control.	A, B1, B2	
	Use of a range of common assembly and disassembly tools plus specific application tools.	A, B1, B2	
	Adjust, set and use torque spanners.	A, B1, B2	
	Identify standards and specifications of common use parts i.e. nuts, bolts, washers and split pins.	A, B1, B2	
	Identify part numbers and serial numbers from an approved component overhaul manual or illustrated parts catalogue.	A, B1, B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Assembly / Disassembly Practices (Common) (Cont.)		
	Fit and remove a range of common use components e.g. split pins, tabs, spring and plain washers, plain and lock nuts.	A, B1, B2	
	Demonstrate competence when wire locking a variety of assemblies.	A, B1, B2	
	Measure shafts, bores, flanges, and adjacent surfaces using a variety of precision measuring instruments & record dimensions.	B1	
	Disassemble and assemble an aircraft component IAW manufacturers overhaul manual.	B1, B2	
	Wiring and Looming (Common)		
	Identify cables and cables values by reference to the maintenance manuals.	B1, B2	
	Identify a range of electrical component symbols.	B1, B2	
	Interpret typical electrical wiring diagrams and schematics circuits.	B1, B2	
	Select and use appropriate cable stripping tools.	B1, B2	
	Using at least two crimping systems, select appropriate cable crimping tools and crimp cables to prepare cable ends or plug / socket terminals.	B1, B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Wiring and Looming (Common) (Cont.)		
	Solder cables to single and multipin connectors / tag boards.	B1, B2	
	Check an aircraft electrical circuit for continuity in conjunction with an electrical wiring diagram.	B1, B2	
	Carry out basic fault finding techniques using a range of test meters.	B1, B2	
	Prepare, and install a simple loom, using at least two binding methods.	B1, B2	
	Discuss and demonstrate the use of a range of test meters to measure volts, amps and resistance in practical task circumstances.	B1, B2	
	Carry out bonding and insulation tests.	B1, B2	
	Explain / demonstrate how to inspect aircraft areas for HIRF protection.	B1, B2	
	Carry out an inspection for lightning strike protection.	A, B1, B2	
	Insertion / extraction of electrical inserts in a variety of electrical connectors.	B1, B2	
	Inspection of electrical cable looms / bundles and cable trunking.	B1, B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Electrical Power / Avionic Systems (Common)		
	Reading and interpretation of electrical schematic and wiring diagrams.	B1, B2	
	Replace a range of Avionic LRUs and apply associated BITE.	B1, B2	
	Remove / Refit Power Distribution Control & Protection equipment.	B1, B2	
	Generator power check / voltage adjustment.	B1, B2	
	Internal lighting bulb and filament changes.	A, B1, B2	
	Replace and function test IFE Equipment (excludes public address).	A, B1, B2	
	Replacement of ovens, boilers and beverage makers.	A, B1	
	Compass / Standby Compass compensation swing and calculations.	B1, B2	
	External lighting bulb and filament changes.	A, B1	
	Implement ESD procedures.	A, B1, B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Sheet Metal Practices		
	Use a range of hand tools, folding and bending machines and guillotine to shape aluminium alloy to achieve an accuracy of: $\pm 0.5 \times$ of bend angle, ± 0.030 ins / 0.075 mm.	B1	
	Interpret engineering drawings and calculate size of material required to produce a component of material with one or more bends.	B1	
	Bend metal to a bend radius, angle and dimensions as given in the engineering drawing.	B1	
	Use a range of hand & power tools to position rivet holes to an accuracy of: ± 0.30 ins / 0.75mm.	B1	
	Identify a range of solid and blind rivets and fasteners.	B1	
	Identify, select and use a range of rivet setting equipment.	B1	
	Set a range of rivets in aluminium sheet. Range to include raised and countersunk rivets.	B1	
	Select and use a range of appropriate rivet closing tools.	B1	
	Select and fit sheet gripping pins.	B1	
	Identify rivet setting faults.	B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Sheet Metal Practices (Cont.)		
	Remove defective rivets without causing further damage to skin.	B1	
	Select and install oversize rivets as instructed in SRM.	B1	
	Set a range of other fasteners in aluminium sheet.	B1	
	Removal of corrosion and reprotection of aluminium sheet metal.	B1	
	Cut and shape material to required profile, finish edges and deburr using approved procedures.	B1	
	Composite and Non-Metallic Practices (other than wood and fabric)		
	Identification of the characteristics and properties of common composite and non-metallic materials other than wood, used in aircraft.	A, B1, B2	
	Identification of sealing and bonding agents.	A, B1, B2	
	Detection of defects/deterioration in composite and non-metallic material.	A, B1	
	Repair of composite and non-metallic materials and structures.	A, B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Wooden Structures Practices		
	Identification of the characteristics and properties of common types of wood and glue used in aircraft.	A, B1	
	Identification of construction methods used in wooden structures.	A, B1	
	Methods of preservation and maintenance of wooden structures.	A, B1	
	Identification and detection of defects in wood material and wooden structures.	A, B1	
	Repair of wooden structures.	A, B1	
	Fabric Covering Practices		
	Identification of the characteristics and properties of common fabrics and adhesives used in wooden structured aircraft.	A, B1	
	Inspection method for fabrics.	A, B1	
	Identification of defects in fabrics.	A, B1	
	Repair of fabric covering.	A, B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices		
	Inspection of a structure using a mirror and a light source.	A, B1	
	Use at least one of the following NDT procedures: dye penetrant or fluorescent dye.	B1	
	Remove & replace a range of flexible hoses including clips and brackets.	A, B1	
	Remove & replace a range of rigid pipes, including clips and brackets.	A, B1	
	Locate components using referencing system, e.g. station numbers.	B1	
	Carry out a heavy landing / turbulence check.	A, B1	
	Assist in the raising / lowering of an aircraft on or off jacks.	A, B1	
	Jack aircraft level to rigging position.	A, B1	
	Assist in the towing of an aircraft.	A, B1	
	Remove and refit a range of aircraft panels.	A, B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	Lubrication of bearings, flight controls and undercarriages.	A, B1	
	Carry out Pre-Departure inspections a - Refuel aircraft. b - Check & replenish oil, hydraulic and pneumatic systems. Tyre Pressures. c - Perform Pre-flight Check.	A, B1	
	Carry out Daily inspections a - Service toilet and potable water system. b - Connect and use correctly ground electrical power. c - Connect and use correctly ground air supply.	A, B1	
	Replenish oxygen system.	A, B1	
	Inspect engine using boroscope.	B1	
	Assist in pressurisation test.	B1	
	Operational check of ground power.	A, B1	
	Carry out a VHF Radio check.	B1	
	Remove / Refit Main and APU Batteries.	A, B1, B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	Remove / Refit Emergency Battery.	A, B1, B2	
	Replace carpets.	A, B1	
	Replace crew seats.	A, B1	
	Replace passenger seats.	A, B1	
	Check seat belts for serviceability.	A, B1	
	Replace and test a range of electrical airframe / engine system components/ boards.	B1	
	Check emergency equipment.	A, B1	
	Functional test of emergency equipment.	A, B1	
	Inspect toilet / vestibule unit for serviceability.	A, B1	
	Inspect Galley unit for serviceability.	A, B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	Inspect and test Engine and Airframe fire detecting systems.	B1	
	Inspection and functional testing of fire protection systems.	B1	
	Replace fire bottle.	B1	
	Removal / refit of Flight Control and subsequent rigging of system.	B1	
	Functional checks on hydraulically operated flight control systems.	B1	
	Hydraulic PFCU change.	B1	
	Replace and test fuel pump.	B1	
	Hydraulic Reservoir inspection, fluid replenishment and recharging.	A, B1	
	Hydraulic System Component Changes.	B1	
	Engine driven Hydraulic pump change (EDP).	B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	Electrical Hydraulic Pump Change (ACMP).	B1	
	Hydraulic pump quill drive inspection.	B1	
	Functional test of windscreen wiper system.	A, B1	
	Removal / refit of windscreen wiper blade.	A, B1	
	Wheel removal / installation.	A, B1	
	Wheel Brake removal / installation.	A, B1	
	Bleed hydraulic brakes.	A, B1	
	Replace oleo seals.	B1	
	Assess fluid levels and charge oleo.	B1	
	Functional test of Anti-Skid system.	B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Replace vacuum pump.	B1	
	Retrieve data from central maintenance system (CMU).	B1	
	Assist in APU removal / refit.	B1	
	Windows & Transparencies cleaning & polishing.	A, B1	
	Replacement of door seals.	B1	
	Remove / Refit cockpit windshield.	B1	
	Assist in a power plant removal & refit.	B1	
	Rig engine thrust lever.	B1	
	Replenish water / methanol system.	A, B1	
	Application of one / two component sealers and compounds.	B1	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	Assist in propeller removal / refit.	B1	
	Check propeller track.	B1	
	Mooring and picketing (Helicopter only).	A, B1	
	Removal / refit main rotor head (Helicopter only).	B1	
	Removal / refit transmission drive shaft (Helicopter only).	B1	
	Removal / refit main rotor gearbox (Helicopter only).	B1	
	Removal / refit tail rotor (Helicopter only).	B1	
	Flight control rigging.	B1	
	Main rotor track and balance (Helicopter only).	B1	
	VHF Comms LRU replacement and Communication Check.	B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	HF LRU replacement and Communication Check.	B2	
	VHF Nav LRU replacement and system tests.	B2	
	Aerial replacement (various).	B2	
	Radio Standing Wave Measurement Tests.	B2	
	ATC / TCAS system component replacement and tests.	B2	
	Intercommunication / Passenger Address Component replacement and testing.	B2	
	Removal / installation of Pitot Static Instruments.	B1, B2	
	Check calibration of a Pitot Static System using a Pitot Static Leak tester.	B1, B2	
	Inertial Reference Unit / Platform Initialisation Check.	B2	
	Test ILS / VOR Systems using appropriate test equipment e.g. Nav 401/402.	B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	Gyroscopic Instrument component replacements and functional tests.	B2	
	Fuel Quantity Indicating systems functional testing.	B2	
	General Engine and aircraft temperature / pressure and flow instrumentation component replacement and testing.	B2	
	Flight Director Systems functional tests.	B2	
	Radio Altimeter system test utilising appropriate (555) test set.	B2	
	DME Functional Testing utilising appropriate test set.	B2	
	Weather Radar system component replacements and functional tests.	B2	
	Autothrottle systems experience and Functional Testing. (optional, fixed wing only).	B2	
	Automatic Flight Modes experience and Functional Testing. (optional, fixed wing only).	B2	
	Stability Augmentation Systems experience and functional testing. (optional, helicopters only).	B2	
Log Book Owner's Name: Signature:			

Date	Competence Obtained	Category	Assessor Signature, Name, Position, Organisation, Approval No.
	Maintenance Practices (Cont.)		
	ADF component replacements and functional tests.	B2	
	Discuss / demonstrate typical maintenance practices on Electronic Flight Instrument systems.	B2	
	Discuss / demonstrate typical maintenance practices on Flight Management systems.	B2	
Log Book Owner's Name: Signature:			

Section 3.1 Maintenance Experience

Aircraft Type: ATA Chapter:

(Aircraft/Engine combination)

Date	A/C Reg	Job No	Task Detail	Supervisor's Name, Signature and Licence Number
				*
				*
				*
				*
				*
				*

* The above work has been carried out correctly by the logbook owner under my supervision and in accordance with the appropriate technical documentation.

Logbook Owner's Name:Signature:

Section 3.2 Typical Maintenance Tasks

Time limits/Maintenance checks

100 hour check (general aviation aircraft).
"B" or "C" check (transport category aircraft).
Assist in carrying out a scheduled maintenance check i.a.w. AMM.
Review Aircraft Maintenance Log for correct completion.
Review records for compliance with airworthiness directives.
Review records for compliance with component life limits.
Procedure for Inspection following heavy landing.
Procedure for Inspection following lightning strike.

Dimensions/Areas

Locate component(s) by zone/station number.
Perform symmetry check.

Lifting and Shoring

Assist in:
Jack aircraft nose or tail wheel.
Jack complete aircraft.
Sling or trestle major component.

Levelling/Weighing

Level aircraft.
Weigh aircraft.
Prepare weight and balance amendment.
Check aircraft against equipment list.

Towing and Taxiing

Prepare aircraft for towing.
Tow aircraft.
Be part of aircraft towing team.

Parking and Mooring

Tie down aircraft.
Park, secure and cover aircraft.
Position aircraft in maintenance dock.
Secure rotor blades.

Placards and Markings

Check aircraft for correct placards.
Check aircraft for correct markings.

Servicing

Refuel aircraft.
Defuel aircraft.
Carry out tank to tank fuel transfer.
Check/adjust tyre pressures.
Check/replenish oil level.
Check/replenish hydraulic fluid level.
Check/replenish accumulator pressure.
Charge pneumatic system.
Grease aircraft.
Connect ground power.
Service toilet/water system.
Perform pre-flight/daily check.

Vibration and Noise Analysis

Analyse helicopter vibration problem.
Analyse noise spectrum.
Analyse engine vibration.

Air Conditioning

Replace combustion heater.
Replace flow control valve.
Replace outflow valve.
Replace safety valve.
Replace vapour cycle unit.

Replace air cycle unit.
Replace cabin blower.
Replace heat exchanger.
Replace pressurisation controller.
Clean outflow valves.
Check operation of air conditioning/heating system.
Check operation of pressurisation system.
Troubleshoot faulty system.

Autoflight

Install servos.
Rig bridle cables
Replace controller.
Replace amplifier.
Replacement of auto flight system LRUs in the case of fly-by-wire aircraft
Check operation of auto-pilot.
Check operation of auto-throttle/auto-thrust.
Check operation of yaw damper.
Perform autopilot gain adjustments.
Perform mach trim functional check.
Check autoland system.
Check flight management systems.
Check stability augmentation system.
Troubleshoot faulty system.

Communications

Replace VHF comm unit.
Replace HF comm unit.
Replace existing antenna.
Replace static discharge wicks.
Check operation of radios.

Electrical Power

Charge lead/acid battery.
Charge ni-cad battery.
Check battery capacity.
Deep-cycle ni-cad battery.
Replace integrated drive/generator/alternator.
Replace switches.
Replace circuit breakers.
Adjust voltage regulator.
Change voltage regulator.
Amend electrical load analysis report.
Repair/replace electrical feeder cable.
Perform functional check of integrated drive/generator/alternator.
Perform functional check of voltage regulator.
Troubleshoot faulty system.

Equipment/Furnishings

Replace carpets.
Replace crew seats.
Replace passenger seats.
Check inertia reels.
Check seats/belts for security.
Check emergency equipment.
Check ELT for compliance with regulations.
Repair toilet waste container.
Repair upholstery.
Change cabin configuration.
Replace cargo loading system actuator.
Test cargo loading system.
Replace escape slides/ropes.

Fuel

Perform antenna VSWR check.
Perform Selcal operational check.
Perform operational check of passenger address system.
Functionally check audio integrating system.
Repair co-axial cable.
Troubleshoot faulty system.

Fire Protection

Check fire bottle contents.
Check/test operation of fire/smoke detection and warning system.
Check cabin fire extinguisher contents.
Check lavatory smoke detector system.
Check cargo panel sealing.
Install new fire bottle.
Replace fire bottle squib.
Inspect engine fire wire detection systems.
Troubleshoot faulty system.

Flight Controls

Inspect primary flight controls and related components i.a.w. AMM
Inspect extending/retracting flaps and slats.
Replace horizontal stabiliser.
Replace spoiler/lift dumper.
Replace elevator.
Deactivation/reactivation of aileron servo control.
Replace aileron.
Replace rudder.
Replace trim tabs.
Install control cable and fittings.
Replace slats.
Replace flaps.
Replace powered flying control unit
Replace flap actuator
Rig primary flight controls.
Adjust trim tab.
Adjust control cable tension.
Check control range and sense direction of movement.

Water drain system (operation).
Replace booster pump.
Replace fuel selector.
Replace fuel tank cells.
Replace/test fuel control valves.
Replace magnetic fuel level indicators.
Replace water drain valve.
Check/calculate fuel contents manually.
Check filters.
Flow check system.
Check calibration of fuel quantity gauges.
Check operation feed/selectors
Check operation of fuel dump/jettison system.
Fuel transfer between tanks.
Pressure de-fuel
Pressure re-fuel (manual control)
Deactivation/reactivation of the fuel valves (transfer de-fuel, X-feed, re-fuel)
Troubleshoot faulty system.

Hydraulics

Replace engine driven pump.
Check/replace case drain filter.
Replace standby pump.
Replace hydraulic motor pump/generator.
Replace accumulator.
Check operation of shut off valve.
Check filters/clog indicators.
Check indicating systems.
Perform functional checks.
Pressurisation/depressurisation of the hydraulic system.
PTU operation
Troubleshoot faulty system.
Relace gear retraction actuator.
Replace uplock/downlock assembly.
Replace shimmy damper.
Rig nose wheel steering.
Functional test of the nose wheel steering system.

Check for correct assembly and locking.
Functional test of primary flight controls.
Functional test of flap system.
Operational test of the side stick assembly.
Operational test of the THS
THS system wear check.

Ice and Rain Protection

Replace pump.
Replace timer.
Inspect/repair propeller de-ice boot.
Test propeller de-icing system.
Inspect/test wing leading edge de-icer boot.
Replace anti-ice/de-ice valve.
Install wiper motor.
Check operation of systems.
Operational test of the pitot-probe ice protection.
Operational test of the TAT ice protection.
Operational test of the wing ice protection system.
Operational test of the engine air-intake ice protection (with engines in operation).
Troubleshoot faulty system.

Indicating/recording systems

Replace flight data recorder (FDR).
Replace cockpit voice recorder.
Replace clock.
Replace master caution unit.
Perform flight data recorder data retrieval.
Implement ESD procedures.
Inspect for HIRF requirements.
Start/stop EIS procedure.
Bite test of the CFDIU.
Ground scanning of the central warning system.
Troubleshoot faulty system.

Landing Gear

Replace shock strut seals.
Servicing of shock strut.
Replace brake unit.
Replace brake control valve.
Bleed brakes.
Replace brake fan.
Test anti-skid unit.
Test gear retraction.
Change bungees.
Adjust micro switches/sensors.
Charge struts with oil and air.
Test outbrake system.
Replace rotorcraft skids.
Replace rotorcraft skid shoes.
Pack and check floats.
Check/test emergency blowdown.
Operational test of the landing gear doors.
Troubleshoot faulty system.

Lights

Repair/replace rotating beacon.
Repair/replace landing lights.
Repair/replace navigation lights.
Repair/replace interior lights.
Replace ice inspection lights.
Repair/replace logo lights.
Repair/replace emergency lighting system.
Perform emergency lighting system checks.
Troubleshoot faulty system.

Pneumatic Systems

Replace filter.
Replace air shut off valve.
Replace pressure regulating valve.
Replace compressor.
Recharge dessicator.
Adjust regulator.

Build up wheel.
Replace main wheel.
Replace nose wheel.
Replace steering actuator.
Relace truck tilt actuator.

Navigation

Calibrate magnetic direction indicator.
Replace airspeed indicator.
Replace altimeter.
Replace air data computer.
Replace VOR unit.
Replace ADI.
Replace HSI.
Check pitot static system for leaks.
Check operation of directional gyro.
Functional check weather radar.
Functional check doppler.
Functional check TCAS.
Functional check DME.
Functional check ATC Transponder.
Functional check flight director system.
Functional check inertial nav system.
Complete quadrantal error correction of ADF system.
Update flight management system database.
Check calibration of pitot static instruments.
Check calibration of pressure altitude reporting system.
Check marker systems.
Compass replacement direct/indirect.
Check Satcom.
Check GPS.
Test AVM.
Troubleshoot faulty system.

Oxygen

Inspect on board oxygen equipment.
Purge and recharge oxygen system.

Check for leaks.
Troubleshoot faulty system.

Vacuum Systems

Inspect the vacuum system i.a.w. AMM.
Replace vacuum pump.
Check/replace filters.
Adjust regulator.
Troubleshoot faulty system.

Water/Waste

Replace water pump.
Replace tap.
Replace toilet pump.
Inspect waste bin flap closure.
Troubleshoot faulty system.

Central Maintenance System

Retrieve data from CMU.
Replace CMU.
Perform BITE check.
Troubleshoot faulty system.

Airborne Auxiliary power

Install APU.
Inspect hot section.
Troubleshoot faulty system.

Propeller

Assemble prop after transportation.
Replace propeller.
Replace governor.
Adjust governor.
Perform static functional checks.
Check operation during ground run.
Check track.
Check setting of micro switches.
Assess and dress out blade damage i.a.w. AMM.
Dynamically balance prop.

Replace regulator.
Replace oxygen generator.
Test crew oxygen system.
Perform auto oxygen system deployment check.
Troubleshoot faulty system.

Structures

Sheet metal repair.
Fibre glass repair.
Wooden repair.
Fabric repair.
Recover fabric control surface.
Treat corrosion.
Apply protective treatment.

Doors

Inspect passenger door i.a.w. AMM.
Rig/adjust locking mechanism.
Adjust air stair system.
Check operation of emergency exits.
Test door warning system.
Remove and install passenger door i.a.w. AMM.
Remove and install emergency exit i.a.w. AMM.
Inspect cargo door i.a.w. AMM.
Troubleshoot faulty system.

Windows

Replace windshield.
Replace direct vision window.
Replace cabin window.
Repair transparency.

Wings

Skin repair.
Recover fabric wing.
Replace tip.
Replace rib.
Replace integral fuel tank panel.
Check incidence/rig.

Troubleshoot faulty system.

Main Rotors

Install rotor assembly.
Replace blades.
Replace damper assembly.
Check track.
Check static balance.
Check dynamic balance.
Troubleshoot.

Rotor Drive

Replace mast.
Replace drive coupling.
Replace clutch/freewheel unit
Replace drive belt.
Install main gearbox.
Overhaul main gearbox.
Check gearbox chip detectors.

Tail Rotors

Install rotor assembly.
Replace blades.
Troubleshoot.

Piston Engines

Remove/install reduction gear.
Check crankshaft run-out.
Check tappet clearance.
Check compression.
Extract broken stud.
Install helicoil.
Perform ground run.
Establish/check reference RPM.
Troubleshoot.

Turbine Engines

Replace module.
Replace fan blade.

Tail Rotor Drive

Replace bevel gearbox.
Replace universal joints.
Overhaul bevel gearbox.
Install drive assembly.
Check chip detectors.
Check/install bearings and hangers.
Check/service/assemble flexible couplings.
Check alignment of drive shafts.
Install and rig drive shafts.

Rotorcraft Flight Controls

Install swash plate.
Install mixing box.
Adjust pitch links.
Rig collective system.
Rig cyclic system.
Rig anti-torque system.
Check controls for assembly and locking.
Check controls for operation and sense.
Troubleshoot faulty system.

Power Plant

Build up ECU.
Replace engine.
Repair cooling baffles.
Repair cowling.
Adjust cowl flaps.
Repair faulty wiring.
Assist in dry monitoring check.
Assist in wet monitoring check.
Assist in engine start (manual mode).
Troubleshoot.

Fuel and Control – Turbine

Hot section inspection/boroscope check.
Carry out engine/compressor wash.
Carry out engine dry cycle.
Engine ground run.
Establish reference power.
Trend monitoring/gas path analysis.
Troubleshoot.

Fuel and Control – Piston

Replace engine driven pump.
Adjust AMC.
Adjust ABC.
Install carburettor/injector.
Adjust carburettor/injector.
Clean injector nozzles.
Replace primer line.
Check carburettor float setting.
Troubleshoot faulty system.

Check control sync (multi-eng).
Check controls for correct assembly and locking.
Check controls for range and sense of operation direction of movement.
Adjust pedestal micro-switches.
Troubleshoot faulty system.

Engine Indicating

Replace engine instrument(s).
Replace oil temperature bulb.
Replace thermocouples.
Check calibration.
Troubleshoot faulty system.

Exhaust – Piston

Replace exhaust gasket.
Inspect welded repair.
Pressure check cabin heater muff.
Troubleshoot faulty system.

Exhaust – Turbine

Replace FCU.
Replace Engine Electronic Control Unit (FADEC).
Replace Fuel Metering Unit (FADEC).
Replace engine driven pump.
Clean/test fuel nozzles.
Clean/replace filters.
Adjust FCU.
Functional test of FADEC.
Troubleshoot faulty system.

Ignition Systems – Piston

Change magneto.
Change ignition vibrator.
Change plugs.
Test plugs.
Check H.T. leads.
Install new leads.
Check timing.
Check system bonding.
Troubleshoot faulty system.

Ignition Systems – Turbine

Perform functional test of the ignition system.
Check glow plugs/ignitors.
Check H.T. leads.
Check ignition unit.
Replace ignition unit.
Troubleshoot faulty system.

Engine Controls

Rig thrust lever.
Rig RPM control.
Rig mixture HP cock lever.
Rig power lever.

Starting

Replace starter.
Replace start relay.

Change jet pipe.
Change shroud assembly.
Install trimmers.
Inspect/replace thrust reverser.
Replace thrust reverser component.
Deactivate/reactivate thrust reverser.
Operational test of the thrust reverser system.

Oil

Change oil.
Check filter(s).
Adjust pressure relief valve.
Replace oil tank.
Replace oil pump.
Replace oil cooler.
Replace firewall shut-off valve.
Perform oil dilution test.
Troubleshoot faulty system.

Replace start control valve.
Check cranking speed.
Troubleshoot faulty system.

Turbocharger – Piston Engines

Replace PRT.
Replace turbo-blower.
Replace heat shields.
Replace waste gate.
Adjust density controller.

Engine Water Injection

Replace water/methanol pump.
Flow check water/methanol system.
Adjust water/methanol control unit.
Check fluid for quality.
Troubleshoot faulty system

Accessory Gearboxes

Replace gearbox.
Replace drive shaft.
Check/inspect magnetic chip detector.

APU

Removal/installation of the APU.
Removal/installation of the inlet guide-vane actuator.
Operational test of the APU.

Section 3.3 Glossary

ABC	Automatic Boost Control	FDR	Flight Data Recorder
ADI	Attitude Direction Indicator	GPS	Global Positioning System
AMC	Automatic Mixture Control	HF	High Frequency
AMM	Aircraft Maintenance Manual	HIRF	High Intensity Radiated Field
APU	Auxiliary Power Unit	HP	High Pressure
ATC	Air Traffic Control	HSI	Horizontal Situation Indicator
AVM	Aircraft Vibration Monitor	LRU	Line Replaceable Unit
BITE	Built in Test Equipment	PRT	Power Recovery Turbine
CFDIU	Centralized Fault Display Interface Unit	PTU	Power Transfer Unit
CMU	Central Monitoring Unit	RPM	Revolutions Per Minute
DME	Distance Measuring Equipment	TAT	Total Air Temperature
ECU	Electronic Control Unit	TCAS	Traffic Collision Avoidance System
EIS	Electronic Instrument System	THS	Trimmable Horizontal Stabiliser
ELT	Emergency Locator Transmitter	VHF	Very High Frequency
ESD	Electrostatic Sensitive Device	VOR	Visual Omni Range
FADEC	Full Authority Digital Engine Control	VSWR	Voltage Standing Wave Ratio
FCU	Fuel Control Unit		